

REMARKS

Reconsideration of the application in view of the following remarks is respectfully requested. No claims have been canceled or amended. Claims 37-99 are currently pending in the application.

In the Office Action, the Examiner rejected claims 37-39, 44-45, 48, 51-60, 65-66, 69, 72-81, 86-87, 90 and 93-99 under 35 U.S.C. § 103(a) as being unpatentable over Mangat et al. (U.S. Patent No. 6,081,814, hereinafter, "Mangat") in view of Toga (U.S. Patent No. 6,832,256). This rejection is respectfully traversed.

Independent Claim 37

Independent method claim 37 recites:

A method implemented by a server, comprising:
receiving a request from a first client to browse contents of a first file system on a first data server, wherein the first data server implements the first file system for managing file access and storage, and wherein the first client is unaware that the first data server implements the first file system;
selecting a first protocol interpreter from a plurality of different protocol interpreters, wherein the first protocol interpreter implements a first file access protocol which enables interaction with the first file system;
invoking the first protocol interpreter to interact with the first file system of the first data sever to obtain therefrom a first list of contents, wherein the first list of contents sets forth a hierarchical listing of at least a portion of the contents of the first file system on the first data server, the first list of contents comprising one or more directories and zero or more files; and
sending at least a portion of the first list of contents to the first client. (emphasis added)

The method of claim 37 provides an advantageous way for a client to interact with the file system of a data server without being aware of the file system that is implemented on the data server. According to claim 37, this is achieved via a server (referred to in the following discussion as the intermediate server). Specifically, when the intermediate

server receives a request from a client to browse the contents of a file system on a data server, the intermediate server selects a protocol interpreter from a plurality of different protocol interpreters. The selected protocol interpreter implements a file access protocol, which enables the intermediate server to interact with the file system on the data server.

Once the protocol interpreter is selected, the intermediate server invokes the protocol interpreter to interact with the file system on the data server. This interaction enables the intermediate server to obtain from the data server a list of contents. This list of contents sets forth a hierarchical listing of at least a portion of the contents of the file system. This list of contents comprises one or more directories and zero or more files. The intermediate server then provides the list of contents to the client. By doing so, the intermediate server in effect provides the client with a view of a portion of the contents of the file system of the data server, thereby allowing the client to browse the file system. This is achieved without the client even being aware of the file system that is implemented on the data server.

Also, because the intermediate server selects the protocol interpreter from a plurality of different protocol interpreters, the intermediate server can, by selecting the proper protocol interpreters, interact with different data servers implementing different file systems. This in turn means that the client, via the intermediate server, can browse the file system contents of different data servers implementing different file systems. Thus, without even being aware of any file system implemented by any data servers, the client is able to browse the file system contents of a number of different data servers implementing a number of different file systems.

Such a method is neither disclosed nor suggested by Mangat and Toga, taken individually or in combination. In rejecting claim 37, the Examiner admitted:

Mangat does not explicitly disclose[sic]:

Selecting a first protocol interpreter from a plurality of different protocol interpreters, wherein the first protocol interpreter implements a first file access protocol which enables interaction with the first file system;
Invoking the first protocol interpreter to interact with the first file system of the first data server to obtain therefrom a first list of contents.

To try to fill the void left by Mangat, the Examiner cited Toga, contending that Toga discloses the aspects of claim 37 that are not disclosed by Mangat. Specifically, the Examiner stated:

However, in an analogous art, Toga discloses a proxy monitoring and interpreting protocol exchanges and restricting session establishment. The SMTP protocol allows access to mailing list information (column 3, lines 15-20, column 4, lines 44-50). Therefore, one of ordinary skill in the art at the time the invention was made would have found it obvious to incorporate or implement Toga's selecting a first protocol interpreter and invoking the interpreter to interact with first file system in Mangat's system in order to access mailing list information.

Applicant respectfully disagrees with this rationale. Rather than disclosing what is claimed in claim 37, Toga discloses a firewall/proxy combination that controls data transfer between a first network and a second network (Abstract). To control data transfer, the firewall/proxy combination receives protocol exchanges between the two networks, parses and interprets the exchanges, and then determines whether the exchanges should be allowed (Col. 2, lines 28-34). As elaborated upon in Col. 3, lines 15-23, the proxy looks at session information and specific commands that may be used during the protocol exchanges, and then determines whether the commands should be allowed to complete based upon the information within the protocol exchanges. If the commands are allowed to complete, then the firewall/proxy allows the commands to pass to the appropriate network resources. From these excerpts, it is clear that the main function of the firewall/proxy combination is to control/limit access to the resources in the networks.

Several points should be noted with regard to Toga. First of all, it should be noted that, unlike claim 37, Toga does not disclose or suggest selecting a protocol interpreter that implements a first file access protocol to enable interaction with a first file system. As noted above, the main function of the firewall/proxy combination is to control/limit access to network resources. The firewall/proxy does not enable interaction with a file system. Once the firewall/proxy combination determines that an access should be allowed, it simply passes the protocol exchange on to the network resource. It does not do anything further to enable interaction with the resource. It certainly does not do anything further to enable interaction with a file system. In Toga, the proxy may be able to parse and understand the commands of a protocol, but it does not do anything further (for example, issue proper commands to a file system) to enable interaction with a file system.

Another point to note is that, unlike claim 37, Toga does not disclose or suggest invoking a protocol interpreter to interact with a file system to obtain a list of contents therefrom. As argued above, in Toga, the firewall/proxy combination is invoked only to parse and interpret protocol commands to determine whether those commands should be passed through to the network resources. Once that determination is made, the firewall/proxy simply either passes or does not pass the commands. It does not do anything further to interact with the network resource. There certainly is no teaching that the firewall/proxy interacts with a file system to obtain a list of contents therefrom.

In rejecting claim 37, the Examiner cited Col. 4, lines 44-50 of Toga. This excerpt discusses the SMTP protocol and how it has an EXPN command that can be used to access mailing list information. The Examiner seems to be analogizing the use of the SMTP protocol to access mailing list information with invoking a protocol interpreter,

which implements a file access protocol, to interact with a file system. This reasoning is flawed in at least one major respect. The SMTP protocol is not a file access protocol. As made clear in Toga, SMTP is an emailing protocol which is used to exchange email between computers (Col. 1, lines 33-34). There is no teaching that SMTP is a file access protocol that can be used to access a file system. Thus, even if the firewall/proxy were to implement the SMTP protocol, and even if this protocol were used to access mailing list information (Applicants are not admitting that such teaching is in Toga), Toga would still not disclose or suggest “selecting a first protocol interpreter from a plurality of different protocol interpreters, wherein the first protocol interpreter implements a first file access protocol which enables interaction with the first file system”, and “invoking the first protocol interpreter to interact with the first file system of the first data sever to obtain therefrom a first list of contents”, as recited in claim 37. Thus, as argued above, Toga neither discloses nor suggests these aspects of claim 37.

From the above discussion, it is clear that neither Mangat nor Toga teach or suggest “selecting a first protocol interpreter from a plurality of different protocol interpreters, wherein the first protocol interpreter implements a first file access protocol which enables interaction with the first file system”, and “invoking the first protocol interpreter to interact with the first file system of the first data sever to obtain therefrom a first list of contents”. That being the case, even if the references were combined (it is assumed for the sake of argument that it would have been obvious to combine the references), the combination still would not produce the method of claim 37. Thus, for at least this reason, Applicant submits that claim 37 is patentable over Mangat and Toga, taken individually or in combination.

Claims Depending from Claim 37

Claims 38-39, 44-45, 48, and 51-57 depend from, and hence, incorporate all of the limitations of claim 37. These claims also recite further limitations that render them patentable over Mangat and Toga. Applicant submits that these claims are patentable over Mangat and Toga for at least the reasons given above in connection with claim 37.

Claims 58-60, 65-66, 69, 72-78

Claims 58-60, 65-66, 69, and 72-78 are apparatus claims, which are analogous to the method claims of claims 37-39, 44-45, 48, and 51-57. Applicant submits that claims 58-60, 65-66, 69, and 72-78 are patentable over Mangat and Toga for at least the same reasons as those given above in connection with claims 37-39, 44-45, 48, and 51-57.

Claims 79-81, 86-87, 90, 93-99

Claims 79-81, 86-87, 90, and 93-99 are computer readable medium claims which are analogous to the method claims of claims 37-39, 44-45, 48, and 51-57. Applicant submits that claims 79-81, 86-87, 90, and 93-99 are patentable over Mangat and Toga for at least the same reasons as those given above in connection with claims 37-39, 44-45, 48, and 51-57.

Claims 40-43, 61-64, and 82-85

In the Office Action, the Examiner rejected claims 40-43, 61-64, and 82-85 under 35 U.S.C. §103(a) as being unpatentable over Mangat in view of Toga and further in view of Stollfus et al. (U.S. Patent No. 6,321,258, hereinafter "Stollfus"). This rejection is respectfully traversed.

Dependent claims 40-43 depend from, and hence, incorporate all of the limitations of claim 37. If claim 37 is patentable over Mangat, Toga, and Stollfus, then it follows that claims 40-43 are also patentable over Mangat, Toga, and Stollfus.

As argued above, Mangat and Toga fail to disclose or suggest at least several limitations of claim 37. These limitations are also not disclosed or suggested by Stollfus (and the Examiner has not contended that they are shown by Stollfus). Thus, even if Mangat, Toga, and Stollfus were combined (assuming *arguendo* that it would have been obvious to combine the references), the combination still would not give rise to the invention claimed in claim 37. Thus, Applicant submits that claim 37 is patentable over Mangat, Toga, and Stollfus, taken individually or in combination. Applicant further submits that claims 40-43, which depend from claim 37, are likewise patentable over Mangat, Toga, and Stollfus for at least the same reasons as those given above in connection with claim 37.

Claims 61-64 are apparatus claims, which are analogous to the method claims of claims 40-43. Applicant submits that claims 61-64 are patentable over Mangat, Toga, and Stollfus for at least the same reasons as those given above in connection with claims 40-43.

Claims 82-85 are computer readable medium claims, which are analogous to the method claims of claims 40-43. Applicant submits that claims 82-85 are patentable over Mangat, Toga, and Stollfus for at least the same reasons as those given above in connection with claims 40-43.

Claims 46-47, 49-50, 67-68, 70-71, 88-89, and 91-92

In the Office Action, the Examiner rejected claims 46-47, 49-50, 67-68, 70-71, 88-89, and 91-92 under 35 U.S.C. §103(a) as being unpatentable over Mangat in view of Toga and further in view of Busey et al. (U.S. Patent No. 5,764,916, hereinafter "Busey"). This rejection is respectfully traversed.

Dependent claims 46-47 and 49-50 depend from, and hence, incorporate all of the limitations of claim 37. If claim 37 is patentable over Mangat, Toga, and Busey, then it follows that claims 46-47 and 49-50 are also patentable over Mangat, Toga, and Busey.

As argued above, Mangat and Toga fail to disclose or suggest at least several limitations of claim 37. These limitations are also not disclosed or suggested by Busey (and the Examiner has not contended that they are shown by Busey). Thus, even if Mangat, Toga, and Busey were combined (assuming arguendo that it would have been obvious to combine the references), the combination still would not give rise to the invention claimed in claim 37. Thus, Applicant submits that claim 37 is patentable over Mangat, Toga, and Busey, taken individually or in combination. Applicant further submits that claims 46-47 and 49-50, which depend from claim 37, are likewise patentable over Mangat, Toga, and Busey for at least the same reasons as those given above in connection with claim 37.

Claims 67-68 and 70-71 are apparatus claims, which are analogous to the method claims of claims 46-47 and 49-50. Applicant submits that claims 67-68 and 70-71 are patentable over Mangat, Toga, and Busey for at least the same reasons as those given above in connection with claims 46-47 and 49-50.

Claims 88-89 and 91-92 are computer readable medium claims, which are analogous to the method claims of claims 46-47 and 49-50. Applicant submits that claims 88-89 and 91-92 are patentable over Mangat, Toga, and Busey for at least the same reasons as those given above in connection with claims 46-47 and 49-50.

For the reasons set forth above, Applicant respectfully submits that claims 37-99 are patentable over the art of record, including the art cited but not applied. Accordingly, allowance of all pending claims is hereby respectfully solicited.

Respectfully submitted,

HICKMAN PALERMO TRUONG & BECKER LLP

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/BobbyKTruong#37499/

Bobby K. Truong

Reg. No. 37,499

2055 Gateway Place, Suite 550
San Jose, California 95110-1089
Telephone No.: (408) 414-1080 ext. 234
Facsimile No.: (408) 414-1076